

## REMARKS/ARGUMENTS

### **35 USC §121 and §372**

In response to the requirement of election / restriction, the Applicant confirms the election made during a telephone conversation with Raymond O. Linker Jr. on 07/14/2008, and directed to the invention of Group I, claims 1-8 and 17-20, drawn to a solid support comprising a functionalized electrically conductor or semiconductor surface.

### **35 USC § 112**

The Examiner states that claim 1 is indefinite because of the word "optionally". To overcome this objection, the phrase "optionally in a mixture with electroactive organic precursors not comprising a functional group of interest" has been deleted from claim 1. The deleted subject-matter is included in new dependent claim 22.

### **35 USC Q103**

Claim 1 has been amended to incorporate the subject matter of original claim 8 in order to specify that the density of the accessible functional groups of interest is between  $10^4/\mu\text{m}^2$  and  $10^{10}/\mu\text{m}^2$ . Claim 8 is therefore cancelled.

The references cited by the Examiner are Bertrand et al. WO 2002/098926; Masunaga et al. US 3,759,797; and Guiseppi-Elie US 5,766,934. Claims 1 – 7 stand rejected under 35 USC 103(a) over Bertrand et al. in view of Masunaga et al. Claims 17 – 20 stand rejected under 35 USC 103(a) over Bertrand et al.

### **Non-obviousness**

Bertrand et al. describes a process for depositing by electro-grafting a strong adherent polymer coating on an electrically conductive surface comprising an electrochemical grafting at the surface of an active monomer (comprising a reactive functional group for attachment of a molecule having at least one complementary reactive group).

The solid support of amended claim 1 differs from Bertrand et al. by the following characteristics:

the use of monomeric species which do not contain reactive functional groups,  
the number of functional groups of interest accessible for the formation of a covalent, ionic or hydrogen bond with a complementary group representing at least 90% of the total

number of functional organic groups of interest,

the density of the accessible functional groups of interest being between  $10^4/\mu\text{m}^2$  and  $10^{10}/\mu\text{m}^2$ .

None of the prior art references cited by the Examiner teaches the specific number of functional groups of interest accessible of at least 90%, nor the density of these accessible functional groups of interest between  $10^4/\mu\text{m}^2$  and  $10^{10}/\mu\text{m}^2$  as recited in claim 1, in order to accelerate the post-functionalization reactions compared to those currently available. Nor do the references teach improving the inorganic / organic interface between the functionalized electrically conducting or semiconducting support and the functional molecules of interest.

Indeed, the presence of at least 90% of the total number of functional organic groups of interest, in combination with the specified density of the accessible functional groups of interest, provide a solid support showing significant advantages, with conducting or semiconducting electrically functionalized surfaces with organic layers having a large variety of functional groups, and a large number of functional groups of interest accessible per surface unit, so as to ensure faster post-functionalization reactions than those currently available.

Consequently, the combination of features specified in amended claim 1 was not obvious to a person of ordinary skill in the art, since none of the cited prior art documents disclose or suggest such a combination to obtain such an advantageous solid support.

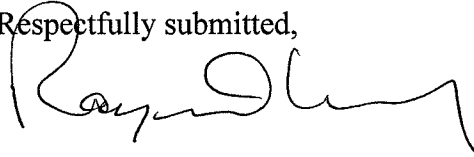
Consequently, the invention as claimed fulfils the non-obviousness criterion with respect to the prior art. Reconsideration by the Examiner, withdrawal of the outstanding rejections, and formal notification of the allowability of the claims as now present are requested.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required

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therefor (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Raymond O. Linker, Jr.", with a stylized, flowing script.

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